

**AMENDMENTS TO THE CLAIMS:**

*This listing of claims will replace all prior versions, and listings, of claims in the application:*

**LISTING OF CLAIMS:**

1. (Previously Presented) A system to aid a user in a visual diagnostic process, comprising:

    a computer system;

    an image database, accessible by said computer system;

    a knowledge database, accessible by said computer system, cross-referenced to said image database, for the purpose of assisting in the diagnostic process, said knowledge database including a plurality of findings-diagnosis links representing relationships between findings and diagnoses;

    a user-interface attached to said computer system to solicit, from the user, a plurality of descriptive characteristics of a sample requiring diagnosis;

    a diagnostic engine operating in said computer system, responsive to said descriptive characteristics, wherein said characteristics of the sample are employed by said engine to automatically identify, using the findings-diagnosis links, a subset including a plurality of possible diagnoses that are consistent with the characteristics; and

    using the subset of diagnoses, automatically reorganizing an information space of said image database for concurrent presentation on said user-interface of a plurality of images representing the subset of possible diagnoses for user review via the user-interface.

2. (Previously Presented) The system of claim 1, wherein said diagnostic engine operates dynamically, using the subset of possible diagnoses, to reorganize the information space in response to modification of at least one of the plurality of descriptive characteristics by the user.

3. (Currently Amended) A method for aiding a visual diagnostic process, including:

creating an image database from a collection of images pertaining to a particular subject matter, said image database residing on a mass storage device operatively associated with a computer;

creating a knowledge database with other data related to the particular subject matter, wherein said knowledge database includes a plurality of findings-diagnosis links representing relationships between findings and diagnoses and is cross-referenced to said image database, for the purpose of assisting in the diagnostic process;

collecting from a user, through a user-interface adapted to the particular subject matter, a plurality of descriptive characteristics of a sample requiring diagnoses;

a diagnostic engine, in response to said descriptive characteristics, using findings-diagnosis links, automatically generating, from a plurality of possible diagnoses included within the knowledge database, a subset including a plurality of possible diagnoses consistent with the descriptive characteristics collected from the user; and

using the subset of possible diagnoses, automatically reorganizing an information space of said image database for concurrent presentation of a plurality of images related to the plurality of possible diagnoses for user review via the user-interface.

4. (Previously Presented) The method of claim 3, wherein said diagnostic engine operates dynamically, using the subset of diagnoses, to reorganize the information space in response to the user's modification of at least one of the plurality of descriptive characteristics.

5. (Previously Presented) A computer system for reducing diagnostic uncertainty using cross-referenced knowledge and image databases, comprising:

a user-interface to solicit a plurality of characteristics of diagnoses from a user;

a diagnostic engine operating under the programmatic control of the computer system and having access to the knowledge database, the knowledge database including a plurality of findings-diagnosis links representing relationships between findings and diagnoses, wherein said characteristics of diagnoses are employed to automatically identify, from the diagnoses for which data is stored in the knowledge database, a subset including a plurality of possible diagnoses from the knowledge database that are consistent with the characteristics; and

using the subset of possible diagnoses identified from the findings-diagnosis links, automatically reorganizing an information space of the image database for presentation to the user, including concurrent presentation of a plurality of images on said user-interface for user review, the plurality of images being representative of at least two possible diagnoses.

6. (Original) The system of claim 5, wherein the plurality of images are presented as a diagnostic image stack.

7. (Original) The system of claim 6, wherein the diagnostic image stack comprises:

a subset of said plurality of images, each image in said subset being associated with a common diagnosis; and

an index into said subset of images wherein the index is independent of the common diagnosis.

8. (Original) The system of claim 6, wherein the diagnostic image stack is displayed to depict stages of disease progression.

9. (Original) The system of claim 6, wherein the diagnostic image stack is displayed to depict a plurality of images associated with a particular diagnosis.

10. (Original) The system of claim 5, wherein at least one image presented to the user includes a display of associated characteristics of diagnoses when a user selects a portion of an image being displayed.

11. (Previously Presented) The system of claim 5, wherein the presentation to the user is accomplished through a display, and where the display concurrently indicates textual information retrieved from the knowledgebase that is related to at least one of the subset of possible diagnoses.

12. (Previously Presented) The system of claim 5, wherein the diagnostic engine uses the characteristics of diagnoses to perform a pattern recognition operation on the knowledge database and to identify possible diagnoses with matching characteristics.

13. (Original) The system of claim 5, wherein the system for reducing diagnostic uncertainty is applicable to and includes characteristics of diseases that have a dermatological manifestation.

14. (Original) The system of claim 5, wherein the system for reducing diagnostic uncertainty is applicable to and includes characteristics of diseases that are of a visual findings type visible to the unaided human eye.

15. (Original) The system of claim 5, wherein the system for reducing diagnostic uncertainty is applicable to and includes characteristics of diseases that are determined based upon a finding determined by mechanical examination means.

16. (Original) The system of claim 5, wherein the user-interface to solicit a plurality of characteristics includes at least one symptom represented as an icon.

17. (Original) The system of claim 16, wherein the icon is an image depicting the form of a dermatological lesion.

18. (Original) The system of claim 16, wherein the icon is an image depicting a distribution of the dermatological lesions about a patient's body.

19. (Original) The system of claim 5, wherein the system for reducing diagnostic uncertainty is applicable to and includes characteristics of oral medications.

20. (Original) The system of claim 9, wherein the iconic representation is an image depicting the shape of an oral medication.

21. (Original) The system of claim 19, wherein the iconic representation is an image depicting a color of an oral medication.

22. (Original) The system of claim 5, wherein the system for reducing diagnostic uncertainty is applicable to and includes characteristics determined during an autopsy.

23. (Original) The system of claim 5, wherein the system for reducing diagnostic uncertainty is applicable to and includes characteristics of a crime scene.

24. (Previously Presented) The system of claim 5, wherein the plurality of characteristics of diagnoses are selected from the group consisting of:

Travel History;  
Occupation;  
Exposures;  
Radiological Signs;  
Medications;  
Habits;  
Cutaneous Signs;  
Morphology;  
Dysmorphology;  
Cutaneous Morphology; and  
Distribution.

25 – 30. (Canceled)

31. (Previously Presented) A method for controlling a computer to accomplish a diagnosis, comprising:

creating an image database from a collection of images pertaining to a particular subject matter, the image database being accessible by the computer;

creating a knowledge database including a plurality of findings-diagnosis links representing relationships between findings and diagnoses, said knowledge database including cross-references to said image database, for the purpose of assisting in the diagnostic process, the knowledge database also being accessible by the computer;

receiving, through a user-interface adapted to the particular subject matter, a plurality of descriptive characteristics of a sample requiring diagnosis;

the computer operating a diagnostic engine, responsive to said descriptive characteristics, the diagnostic engine using the findings-diagnosis links to automatically generate, from a plurality of possible diagnoses included within the

knowledge database, a subset including a plurality of possible diagnoses consistent with the descriptive characteristics collected from the user; and

automatically reorganizing an information space of said image database for concurrent display of a plurality of images related to the subset of possible diagnoses for user review via the user-interface.

32. (Previously Presented) The method according to claim 31, wherein receiving a plurality of descriptive characteristics includes visual findings.

33. (Previously Presented) The method according to claim 32, wherein said visual findings are entered through the user interface by selection of a picon.

34. (Previously Presented) The method according to claim 32, wherein said visual findings are entered through the user interface by selection of an image.

35. (Previously Presented) The method according to claim 31, wherein said knowledge database includes at least one diagnostic module, and where the available descriptive characteristics are defined in accordance with the diagnostic module.

36. (Previously Presented) The method according to claim 35, wherein said at least one diagnostic module includes diagnoses associated with the module based upon medical literature.